

- 2 -

15.(Amended) A base station operable to perform a call admission control upon receipt of a request for a new session, the base station comprising:

a call admission control block adapted to make an estimate of a new system FER which will result should the new session be admitted, and to decide to admit or to deny the new session on the basis of the new system FER estimate.

16.(Amended) A base station controller operable to perform a call admission control upon receipt of a request for a new session, the base station controller comprising:

a call admission control block adapted to make an estimate of a new system FER which will result should the new session be admitted, and to decide to admit or to deny the new session on the basis of the new system FER estimate.

REMARKS

In paragraph 1 of the current Detailed Action, the Examiner has rejected claim 14 under 35 U.S.C. 112, first paragraph. In paragraph 4 of the Detailed Action, the Examiner states "Applicant argues that FER implementation into MAC layer device is disclosed on pages 9 and 10 of the application." With respect, this is not what the Applicant has argued. Instead, in the previous response of January 2, 2003 reference was made to pages 9 and 10 for a detailed method of calculating the frame error rate. It was also argued that the MAC layer is a well understood aspect of a communication device, and a person skilled in the art would certainly understand how to implement the method described on pages 9 and 10 in the MAC layer of a device. A MAC layer can certainly be made aware of frame error rate information, and with respect it is submitted that it is not necessary to provide details of how this is conveyed to the MAC layer. This would be analogous to requiring a detailed circuit implementation and code every time any patent specification refer to the frame error rate and with respect, Applicant submits that one skilled in the art would understand that this is not necessary. The Examiner is respectfully requested to withdraw the rejection of claim 14 under 35 U.S.C. 112 as set out in

- 3 -

paragraph 1 of the Detailed Action.

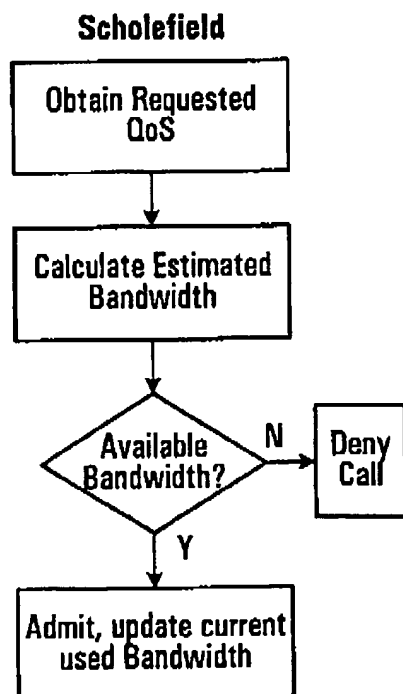
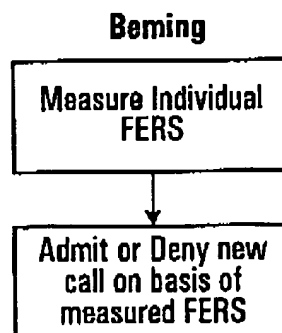
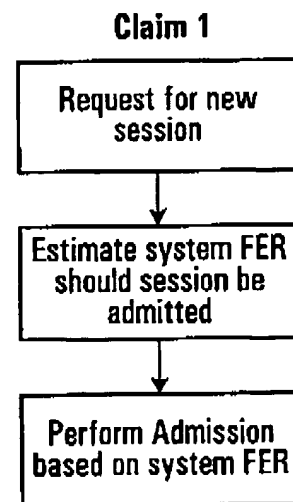
In paragraph 2 of the current Detailed Action, the Examiner has rejected claims 14, 15 and 16 under 35 U.S.C. 112, second paragraph, as being indefinite stating that the "claims do not specify any structures that would define the claimed devices". Each one of these claims has been amended to recite an element which defines a structure of the claimed device. The Examiner is respectfully requested to withdraw his rejection of claims 14, 15 and 16 under 35 U.S.C. 112 as set out in paragraph 2 of the Detailed Action.

In paragraph 3 of the Detailed Action, the Examiner has rejected claims 1 to 4, 10 and 19 to 20 under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,216,006 (Scholefield) in view of United States Patent No. 5,740,537 (Berning) and provides the same arguments as set out in the previous Detailed Action of October 2, 2002. In paragraph 4 (pages 5 and 6) of the current Detailed Action, the Examiner provides a response to the Applicant's arguments of the previous response. The Examiner disagrees with Applicant's argument that Scholefield does not teach using QoS at all in performance call admission and states "Scholefield teaches using QoS with traffic descriptors as mean bit rate, peak bit rate and delay" (col. 3 lines 9-22) and the effective bandwidth as the amount of bandwidth has to be reserved in order to meet the QoS requirements (col. 3 lines 23-25) to provide users with QoS levels (col. 2 lines 64-66). As indicated on page 4 of the previous response, the determination of the amount of bandwidth that a call will require, and then the examination of the existing bandwidth to determine if the required bandwidth can be accommodated is not the same as making an estimate of a new system QoS that will result if the new session is admitted. For example, suppose there are existing connections having a bandwidth totalling 80 Mbps on a channel having a capacity of 100 Mbps, and a request comes in to add a connection having a capacity of 15 Mbps. Using the method taught in Scholefield, the resulting capacity after adding the new connection will be 95 Mbps and as such the call would be admitted. No consideration is made as to what the new system quality of service might be. Quality of service is some measure of quality associated with a signal. In construing Scholefield, the Examiner has equated QoS solely with bandwidth. Scholefield, which contains frequent references to both expressions, does

- 4 -

not make this equivalence. Lines 14-19, Col. 3 of Scholefield specify the QoS to be traffic descriptors such as mean bit rate, the peak bit rate, and the requested delay. Using specified QoS parameters, the new estimated bandwidth is determined. If there is sufficient bandwidth, the call is admitted. In this way, simply determining a bandwidth occupied by a service as taught by Scholefield has nothing to do with quality of service -- This is simply a "binary" yes/no assessment. Rather, the bandwidth used is that required for the requested QoS. There is no concept of an unsatisfactory QoS -- either the BW is available or not. As such, although Scholefield makes use of the term QoS, this has nothing to do with making an estimate of a new system QoS.

Scholefield operates as per Fig. A below, while claim 1 operates as per Fig. C below.

FIG. A**FIG. B****FIG. C**

- 5 -

The Examiner has equated QoS and Bandwidth but the Applicant submits the telecom industry associates distinct and different meanings to these terms, and the above flowchart makes it clear these terms have distinct and different meanings. The QoS is an input to calculating an estimated bandwidth.

In the current Detailed Action (page 5, last paragraph), the Examiner states "Scholefield, not Beming, does teach an estimate of new system QoS" and refers to Figure 3; col. 2 lines 64-67, col. 3 lines 1-8; and col. 3 lines 54-57. With respect Applicant disagrees with this statement. In particular, Applicant submits that in col. 2 lines 64-67, col. 3 lines 1-8, and col. 3 lines 54-57, an admission decision is determined by whether there is enough surplus capacity on a wireless data network to accommodate an effective bandwidth of a service request. This is achieved by simply adding an expected bandwidth to an existing bandwidth to determine a new total bandwidth and as discussed in the previous response, this does not equate to the more complicated task of "making an estimate of a new system FER". Thus, with respect, it is submitted Scholefield does not teach making an estimate of a new system QoS.

Beming in any case does not teach a "system FER". Beming teaches that an FER for each wireless terminal may be employed to determine "levels of quality of ongoing communications". On the basis of this, the additional call admitted permits, or denies admission of additional communications in the communications system. Thus, Beming 1) does not teach a system FER, and 2) does not teach predictively determining a measure of QoS which should arise if a new call is admitted. Importantly, there is no FER prediction in Beming. Fig. B above summarizes Beming at least for the FER-based embodiment.

The Examiner disagrees with the Applicant's argument that Scholefield and Beming teachings cannot operate in combination and states that "Scholefield teaches both steps of the Applicant method, but uses other than FER QoS determiners, Beming teaches FER as QoS determiner". Based on this argument the Examiner concludes that the method of Scholefield will work fine with FER as a QoS determiner. With respect, as discussed above Applicant submits that Scholefield does not teach the step of making an estimate of a new system QoS and therefore Applicant submits that the Examiner's argument is not well founded. As indicated in the

- 6 -

previous response, Scholefield teaches admitting calls as a function of available bandwidth while Beming teaches admitting calls as a function of measured current frame error rates (note these are not system frame error rates as claimed in claim 1 either). Combining these two methods would result in a system in which calls are admitted only in the event that the bandwidth is available and the current frame error rates are acceptable, but this is not the claimed invention. There is nothing in the combination of the references which would teach any method of predicting a system frame error rate, or suggesting that such a predicted frame error rate would then be used in place of available bandwidth to perform a call admission. Thus, there is clearly no expectation of success in combining the two references and coming up with the claimed invention.

As discussed in the previous response, claims 3, 4 and 10 further define the frame error rate mechanism, and of course none of this is taught in either of the cited references. Applicant has invented an entirely new method of determining a system FER. Similar arguments apply to claims 19 and 20. Applicant notes that the Examiner has not addressed these arguments in the current Detailed Action. The Examiner is respectfully requested to withdraw the rejection of claims 1 to 4, 10 and 19 to 20 under 35 U.S.C. 103(a) as set out in paragraph 3 of the current Detailed Action.

Finally, in the event the Examiner maintains his prior art rejections Applicant intends to submit a Notice of Appeal and an Appeal Brief regarding the 35 U.S.C. 112 rejection of claim 14 and the 35 U.S.C. 103(a) rejection of claims 1 to 4, 10 and 19 to 20. As such, Applicant request that the amendments to claims 14, 15 and 16 be entered to deal with the 35 U.S.C. 112 rejection of these claims and reduce the number of issues raised in the Appeal Brief.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached pages are captioned "Version with markings to show changes made".

The Examiner is respectfully requested to pass this application to allowance but, if there are any outstanding issues, the Examiner is respectfully requested to telephone the

- 7 -

undersigned.

Respectfully submitted,

By


Allan Brett

Registration No. 40476
Smart & Biggar

Dated: May 16, 2003
Ottawa, Ontario, Canada
Tel: (613) 232 2486 ext. 323

RAB:MPP:acb

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 14, 15 and 16 have been amended as follows:

14.(Amended) A MAC (media access control) layer implementation device operable to perform call admission control upon receipt of a request for a new session, the device comprising:

[means for making] a call admission control block adapted to make an estimate of a new system FER which will result should the new session be admitted[;], and [means for deciding] to decide to admit or to deny the new session on the basis of the new system FER estimate.

15.(Amended) A base station operable to perform a call admission control upon receipt of a request for a new session, the base station comprising:

[means for making] a call admission control block adapted to make an estimate of a new system FER which will result should the new session be admitted[;], and [means for deciding] to decide to admit or to deny the new session on the basis of the new system FER estimate.

16.(Amended) A base station controller operable to perform a call admission control upon receipt of a request for a new session, the base station controller comprising:

[means for making] a call admission control block adapted to make an estimate of a new system FER which will result should the new session be admitted[;], and [means for deciding] to decide to admit or to deny the new session on the basis of the new system FER estimate.